

# Press Release

20th April 2009



ZENERGY POWER

Zenergy Power plc  
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Zenergy Power plc ('Zenergy' or the 'Group')

## Con Edison Working with Zenergy Power to Develop 'Smart Grid' Device to Protect New York City's Electrical System from Power Interruptions

Zenergy Power plc (AIM:ZEN.L), the superconductor energy technology company, is pleased to announce that its wholly owned subsidiary, Zenergy Power Inc., has been contracted by The Consolidated Edison Company of New York ('Con Edison') to build and test a 'Smart Grid' device for improving the stability and reliability of New York City's electrical system. The equipment, known as a Fault Current Limiter ('FCL'), instantly detects and absorbs spikes in power that, left unmanaged, could damage electrical equipment or trigger power outages.

Con Edison, a subsidiary of Consolidated Edison, Inc. [NYSE: ED], authorized a project to design, build and test a single-phase FCL of a type that would be applicable to a number of substations within the utility's electrical systems. Zenergy expects to deliver the prototype by the end of August.

Common events, such as storms or accidents, can produce large spikes in current on the grid. These surges are termed "faults" and may damage electrical equipment or cause partial or total power failures on an electrical network. In part due to steadily increasing electricity demands of New York City, Con Edison has been active in studying new technologies to manage the impact of these 'faults' and maintain its system's reliability.

Pat Duggan, Project manager and FCL specialist, Con Edison, commented:

"Fault current limiters will be an essential element of the smart grid to maintain reliability and improve its resilience and flexibility. This is especially important as the load grows, including the move to electricity as a preferred source for new uses such as plug-in hybrids."

In practice, Zenergy's FCL is electrically connected to the grid it protects. It allows normal current to pass through unimpeded but, when it senses a fault current, instantly counters

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the electrical flow. This reaction, created in part by the superconductor in the device, chokes off a potentially damaging electrical spike. Once the fault current subsides, the FCL again allows standard levels of current to flow, protecting the electrical system automatically without human intervention.

Tests that Zenergy conducts in its development of the FCL for Con Edison will ensure the device is able to protect equipment from the damaging effects of fault currents that occur on the utility's 13.8 kilovolt (kV) "feeder system" -- an electrical distribution network that delivers power to customers. At the conclusion of testing, Zenergy expects to extend its designs to other FCLs that are customized for protecting Con Edison's and other utilities' equipment on higher voltage lines of up to 138kV and beyond.

Today, power disruptions from faults and related issues are estimated by the U.S. Department of Energy (DOE) to cost the U.S. economy more than \$100 billion per year. Under its mandate to lead the modernization of the electric grid, the DOE partially funded Zenergy's development of the FCL to address these issues. Nationally, a major effort is underway to develop and deploy "Smart Grid" devices to help the present infrastructure meet the country's growing energy requirements. Devices like Zenergy's FCL greatly improve grid reliability and security, which is necessary to establishing a more stable service, fewer outages and more rapid power restoration following electrical interruptions.

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### About Con Edison

Con Edison is a subsidiary of Consolidated Edison, Inc. [NYSE: ED], one of the nation's largest investor-owned energy companies, with approximately \$14 billion in annual revenues and \$33 billion in assets. The utility provides electric, gas, and steam service to more than 3 million customers in New York City and Westchester County, New York. For additional financial, operations, and customer service information, visit Con Edison's Web site at <http://www.ConEd.com/>.

### About Zenergy Power plc

Zenergy Power plc is a superconductor energy technology company, listed on the AIM market of the London Stock Exchange and comprising three operating subsidiaries located in Germany, USA and Australia. By innovating superconductor based technology solutions, the Group provides patented clean energy devices that greatly improve the efficiency with which customers generate, distribute and use electrical energy.

To date, the incredibly energy efficient superconductive components at the heart of Zenergy's products have successfully delivered industrial customers significant reductions in energy consumption and provided utility companies with cutting-edge smart grid solutions. Looking to the near future, the Group is also developing a range of highly-energy efficient superconductor components for electricity generators capable of greatly reducing the cost of producing offshore wind power. All of which leads to the production of fewer carbon emissions in the world and a more sustainable economic growth path. In 2007 Zenergy achieved the world's first sale of an industrial scale commercial application incorporating superconductor technology and has subsequently developed products capable of addressing multi-billion dollar global markets.

### About superconductivity

Superconductive materials are capable of conducting electricity without any resistance and were first discovered in 1911 in what was to prove to be one of the most significant scientific breakthroughs of the 20th century.

Superconductors enable:

- (a) Induction Heaters to be twice as efficient for the metals industry
- (b) Fault Current Limiters to protect power grids from blackouts
- (c) Direct-drive wind generators to be significantly reduced in size and weight allowing the operation of wind generators in excess of 8 MW
- (d) Existing hydro-power sites to increase energy efficiency and electrical power output

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